

### **REMARKS**

After entry of the instant Amendment, claims 1-8, 10-12, 14, 19-21, 23, and 24 are pending in the instant application, with claims 1, 10 and 19 in independent form. Claims 1, 10, 14, and 19 have been amended to further specify that the previously-claimed bis (2-pyridylthio-l-oxide) non-ferrous salt is bis (2-pyridylthio-l-oxide) zinc salt (as previously claimed in claims 9 and 13) in accordance with the agreement reached with the Examiner during the Interview on November 30, 2010. Claims 1, 4, 5, 7, 10-12, 14, and 19-21 have been amended at the request of the Examiner to claim the “source of ferrous ions” more clearly as a “source of iron(II) ions” for purposes of clarifying the scope of this claim element in accordance with the specification of the original application as filed (see the last sentence of paragraph [0010] on page 4, which indicates that a “source of iron(II) ions” is referred to as a source of ferrous ions within the application). Because the amendments to the claims represent subject matter that was previously claimed (in the case of the amendments that further specify the non-ferrous salt to be a zinc salt) or mere clarifying amendments, and because the amendments to the claims have previously been discussed and agreed upon with the Examiner, the Applicants respectfully submit that the amendments made herein are properly entered after final rejection. Claims 9 and 13 have been cancelled. Claims 15-18 and 22 were previously cancelled. No new claims are added. Table 1 of the specification of the application has also been amended to correct a clear grammatical error in the value of the amount of the ZPT present, in ppm, for Example 6. The Applicants respectfully submit that no new matter is added through the amendments to the claims and specification.

Claims 1-4, 6-10, 12, and 13 stand rejected under 35 U.S.C. §102(b) as being anticipated by Nagaoka (U.S. Patent No. 5,378,406) as evidenced by Merriam-Webster. Claims 5, 11, 14, 16, and 19-21 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Nagaoka in view of Insley (U.S. Patent No. 3,995,184). In view of the amendments to independent claims 1, 10, and 19, and in view of the Interview with the Examiner, the Applicants respectfully submit that the rejections under 35 U.S.C. §102(b) over Nagaoka, and under 35 U.S.C. §103(a) over Nagaoka in view of Insley, have been overcome for the following reasons:

1) Nagaoka does not explicitly or inherently teach a source of iron(II) ions such that Nagaoka does not anticipate independent claims 1, 10, and 19 under 35 U.S.C. §102(b),

2) While Nagaoka does teach an organo-titanium compound as a catalyst, selection of a source of iron(II) ions from the combined teachings of Nagaoka and Insley, along with selection of organo-titanium compounds and the specifically claimed bis(2-pyridylthio-1-oxide) zinc salt from Nagaoka, is not from a finite number of identified predictable solutions presented by the combined teachings of Nagaoka and Insley so as to amount to an obvious combination under 35 U.S.C. §103(a); and

3) Unexpected results are attained with the instantly claimed combination of the specific zinc salts in the claimed amounts, the source of iron(II) ions, and the organo-titanium compound so as to provide objective indicia of non-obviousness of the invention claimed in independent claims 1, 10, and 19.

### **As to Anticipation of Independent Claims 1 and 10**

As agreed upon with the Examiner during the Interview, there is no explicit disclosure of a source of iron(II) ions within Nagaoka such that the anticipation rejections of independent claims 1, 10, and 19 over Nagaoka are overcome.

### **As to Obviousness of Independent Claims 1, 10, and 19 in View of Nagaoka and Insley**

With regard to obviousness of independent claims 1 and 10 over the combined teachings of Nagaoka and Insley, the Applicants submit that the instantly claimed components would have to be selected from an unduly broad category of components such that the Examiner cannot find that the instant invention can result from selection of a finite number of identified, predictable solutions. *KSR* has provided significant guidance for establishing obviousness under such circumstances. In particular, “when there is motivation to solve a problem and there are a finite number of identified, predictable solutions, a person of ordinary skill has good reason to pursue the known options within his or her technical grasp. If this leads to anticipated success, it is likely the product not of innovation but of ordinary skill and common sense.” See MPEP 2143 citing *KSR Int’l Co. v. Teleflex Inc.*, 127 S.Ct. 1727, 1742. The MPEP provides guidance in regard to the subject holding of *KSR*. In particular, the Applicants are likely to overcome rejections relying upon the subject holding of *KSR* when what would have been ‘obvious to try’ would have been to vary all parameters or try each of numerous possible choices until one possibly arrived at a successful result, where the prior art gives either no indication of which parameters are critical or no direction as to which of many possible choices.... In others, what was ‘obvious to try’ was to explore a new technology or general approach that seemed to be a promising field of experimentation,

where the prior art gave only general guidance as to the particular form of the claimed invention or how to achieve it.” See MPEP 2145(X)(B.).

In the instant case, significant selection of various parameters is necessary to arrive at the instant invention based upon the combined teachings of Nagaoka and Insley, and the need for selection is not merely isolated to a source of iron(II) ions from the general class of iron oxide fillers disclosed in Nagaoka. In particular, variables that require selection to arrive at the invention claimed in claim 1, based upon the teachings of Nagaoka, include filler type (iron oxide is but one of numerous different types of fillers disclosed as suitable for purposes of Nagaoka), amount of the non-ferrous metal salt (Nagaoka discloses a very broad range of amounts that can be as high as 25 percent by weight), and the type of catalyst (numerous different catalysts are disclosed beyond organo-titanium catalysts).

There is no indication within Nagaoka whatsoever that any of said parameters are critical, and there is further no direction as to which variable to set based on the many possible choices. In fact, Nagaoka is concerned with anti-fungal properties of the composition taught therein, and the focus of Nagaoka is on extending the period of anti-fungal effectiveness of the non-ferrous metal salt included in the composition disclosed therein by adding a benzimidazolylcarbamate compound into the composition. Addition of a filler is merely an afterthought within the disclosure of Nagaoka, and there is nothing to suggest advantages of utilizing a particular filler. Coupled with the fact that Applicants have shown reduction in color when even very small amounts of bis(2-pyridylthio-1-oxide) zinc salt are used in combination with the source of iron(II) ions in a composition including organo-titanium compounds (which are described in the background of the instant application as a

source of yellowing), the Applicants respectfully submit that selection of the instantly claimed components, and amount of the bis(2-pyridylthio-1-oxide) zinc salt, is not obvious in view of the combined teachings of Nagaoka and Insley.

**As to Unexpected Results Attained Through the Instant Invention**

A significant finding for purposes of the instant invention, and as discussed with the Examiner during the Interview, was that very low amounts of the bis(2-pyridylthio-1-oxide) zinc salt could be used to reduce discoloration in the subject compounds when used in conjunction with a source of iron(II) ions. In particular, the Examples demonstrate that as little as 5 ppm, or 0.0005%, of bis(2-pyridylthio-1-oxide) zinc salt significantly reduce discoloration in an organo-titanium catalyzed composition. Furthermore, the upper claimed limit for the amount of the bis(2-pyridylthio-1-oxide) zinc salt is also significant when the results of the Examples are considered. In particular, with reference to Table 3, it is notable that reduction in discoloration of the composition improves from Example 1 through Example 5, but reduction in discoloration for Example 6 is only slightly better than Comparative Example 1 (with no bis(2-pyridylthio-1-oxide) zinc salt).

To explain the results and to reiterate the discussion with the Examiner, reference is made to the \*b and Δb values for the Examples, in conjunction with explanations in the specification. Paragraph [0003] of the original application indicates that yellowing of the diorganopolysiloxane composition is mainly caused by the presence of an organo-titanium compound. Paragraph [0016] of the original application explains that a metal exchange reaction occurs between the source of ferrous ions (i.e., the source of iron(II) ions) and the bis(2-pyridylthio-1-oxide) zinc salt to result in a bis(2-pyridylthio-1-oxide) ferrous salt, which

is bluish in color and thus offsets yellowing. Thus, it makes sense that as the amount of the bis(2-pyridylthio-1-oxide) zinc salt increases from Example 1 to 6, the  $a^*$  value decreases (indicating an increase in “blueness” of the composition, whereas higher  $a^*$  values indicate yellowness). However, when compared to the color of the original diorganopolysiloxane composition (as gauged through  $\Delta b$  values), yellowness is overcome but bluish discoloration can account for  $\Delta b$  values that approach the  $\Delta b$  value of the control (see Table 3, Example 6 compared to Comparative Example 1). Example 6 contains approximately 0.0497% of the bis(2-pyridylthio-1-oxide) zinc salt. The specification explicitly indicates that if the salt is used in an amount exceeding 0.05% by weight, a cured body obtained from the diorganopolysiloxane composition will turn blue. The Examples clearly illustrate the statements set forth in the specification and support the unexpectedness of the results for the entire range of amounts for the bis(2-pyridylthio-1-oxide) zinc salt present in the claimed diorganopolysiloxane composition along with the claimed source of iron(II) ions and the organo-titanium compound.

In view of the foregoing, the Applicants respectfully submit that independent claims 1, 10, and 19 are novel over the teachings of Nagaoka, and are non-obvious over the combined teachings of Nagaoka and Insley such that those claims are in condition for allowance. Because claims 1, 10, and 19 are in condition for allowance, the Applicants respectfully submit that the claims that depend from claims 1, 10, or 19, respectively, are also in condition for allowance.

The Applicants respectfully submit that this Amendment is filed timely within the 2-month period for response after final rejection, and it is believed that no fees are presently due.

However, the Commissioner is authorized to charge our deposit account no. 08-2789 for any additional fees or credit the account for any overpayment.

Respectfully submitted,

**HOWARD & HOWARD ATTORNEYS, PLLC**

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/Christopher S. Andrzejak/

**Christopher S. Andrzejak, Reg. No. 57,212**

450 West Fourth Street

Royal Oak, MI 48067-2557

(248) 723-0438